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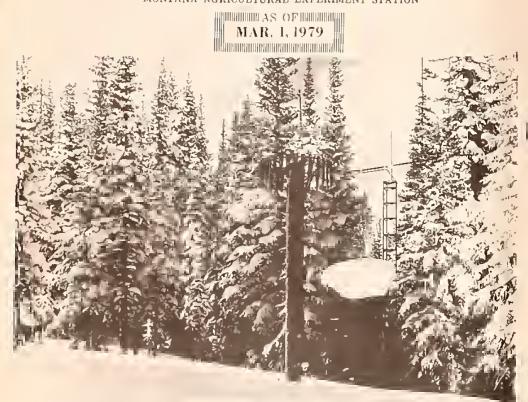


#### U. S. DEPARTMENT OF AGRICULTURE \* SOIL CONSERVATION SERVICE

### WATER SUPPLY OUTLOOK FOR MONTANA

FEDERAL-STATE-PRIVATE COOPERATIVE SNOW SURVEYS

Collaborating with MONTANA AGRICULTURAL EXPERIMENT STATION



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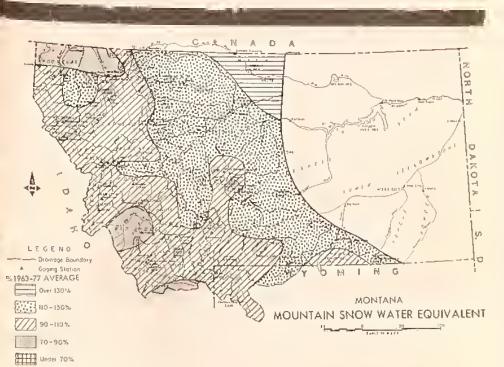
UNITED STATES DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE P.O. Bov 98 Boriwan, Montana 59715

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#### MOUNTAIN SNOWPACK

The mountain snowpack conditions have improved during February. Many areas improved during February. Many areas west of the divide have received well above average snowfall this month. Mountain watersheds along the Montana-Idaho border on the west side of the Bitterroot and Clark Fork River drainages received 15-18 inches of snow water equivalent during the past month. This would be equivalent to over 150 inches of snowfall. Most watersheds have recorded average or above average snowfalls for February with water content increases 5 to 10 inches common in high elevations. Moisture laden storms coming from the west and southwest, accompanied by warm temperatures provided good moisture increases in the mountain snowpack.

Most areas now have average or above mountain snowpack. The Kootenai

River drainage north of Libby and the Flathead River drainage north of Kali-spell, did not receive as much moisture as the more southerly areas and the mountain snowpack remains below average. The only other areas in the state showing below average conditions are the extreme southern part of the Red Rock River drainage south of Dil-lon and most of the Big Hole River drainage.

Foothill and valley areas on the east slope of the mountains east of the divide continue to show above average snowpack. Very heavy snowpack covers the Bear Paw and Little Rock Mountain near Havre. Cooperators also report that little melt has occurred in the valley areas and many areas still have considerable amounts of snow remain-



#### WATER SUPPLY OUTLOOK

The outlook for spring and summer streamflow has improved. Good high elevation snowfall in February has increased runoff forecasts by 5-10 percent on most streams.

Most mountain drainages are now expected to produce between 90-100 percent of their average streamflow. Areas still below average include most of the Jefferson River drainage, the Kootenai and Yaak River drainages, the North Fork of the Flathead River some small streams in the Upper Clark Fork drainage and the Missouri River.

Above average runoff is expected from the Bear Paw, Little Rocky, Highwood and Snowy Mountains and from most low elevations where snow pack is heavier than normal.

Late season irrigation water supplies should be adequate in most areas unless abnormal weather patterns develop in the next two or three months. Some shortages are projected for late season irrigation water in the Jefferson River tributaries without stored water.

# Columbia River Drainage

#### STREAMFLOW FORECASTS

	THIS YEAR	~	1.5000	THS 1	EAR	PAST A	ECONO	THIS Y	FAR	PAST 6	ECORD
	FORECAST	- Page 1	ACRE ICIT	LOREC	CAST	THOUSAND AC	RE MEFT	FORE		THOUSAND A	CRE FECT
BASIIN, SEREAM INSTITUTORECAST POINT	Thousand Paicens Acre Lass Averag	al la	# · · · · · · ·	Trougena Acre Lera	Aister 9	L+97 I+2/	V +2+3T+	TI.ou+and Ac+a Fool	Paisent or Aveset e	[ 035 X+5+	A.emj.
Average based on 1963-1977 period.	Apr	il - Septe	mber	,	Apr11	- July			April	- June	
KOOTENAI RIVER below Libby Oam (1)  FISHER RIVER near Llbby	6,000 82 262 97 430 80 7,200 81 42.6 84 15.2 82 63.6 82 14.5 86 70.8 90	8,436 33.7 18.5	7,279 270 538 8,883 8,883 S0.7 18.5 77.6 16.9 70.0 23.6	5,100 247 405 6,300 225 34.0 12.6 50.1 13.7 64.0 20.6	82 98 79 82 79 83 82 86 90	5,749 - 7,207 294 23.8 15.0	6,219 253 514 7,727 286 41.2 15.4 61.3 16.0 71.1 21.8	5,100 205	83 79	5,618 251	6,150 260
NEVAGA CREEK near Finn	22.2 94 940 92 840 100 1,780 96	: ) - , η,914	1,017 843	850 740 1,590	92 102 96 94	1,670	920 730 1,651	735 630 4,365	93 1 03 97	1,360	794 613 1,408
WEST FORK BITTERROOT RIVER near Conner (7)	173 93 590 98 53.6 93 35.6 92	707	602 57 .4 38 .8	550 47.0 31.2	100 94 93	647	552 49.8 33.6	475	99	545	480
BURMT FORK CREEK near Stevensville (8)  BITTERROOT RIVER at Missoula (9)  CLARK FORK RIVER below Missoula  CLARK FORK RIVER at St. Regis (MWS)  NORTH FORK FLATHEAO RIVER near Columbia Falls  MIDDLE FORK FLATHEAO RIVER near West Galcier  SOUTH FORK FLATHEAO RIVER near Columbia Falls  FLATHEAO RIVER at Columbia Falls (10)	35.6 92 1,530 93 3,310 97 4,250 94 1,560 79 1,880 96 2,240 97 5,800 92	4,710 9 1,935 7 2,367	1,543 3,405 4,521 1,969 1,911 2,302 6,330	1,430 3,020 3,840 1,420 1,730 2,100 5,400	101 98 94 80 99 97 93	4,219 - 1,711 2,20S 5,666	1,416 3,069 4,078 :,782 1,750 2,159 5,827	1,230 2,595 3,280 1,220 1,470 1,850 4,650	99 94 81 100 98	3,458 1,402 1,872 4,721	1,211 2,618 3,492 14,98 1,470 1,884 4,964
SWAN RIVER near Big Fork  FLATHEAD RIVER near Polson (11)  CLARK FORK RIVER near Plains (11)(MWS)  THOMPSON RIVER near Thompson Falls  PROSPECT CREEK at Thompson Falls	655 96 6,850 93 11,000 89 253 96 135 94	7,588 12,872 5 -	681 7,394 12,340 263 143	580 6,380 9,980 227 125	97 94 89 97 94	6,764 11,505	596 6,806 11,222 234 133	5,450 8,460	94 89	5,581 9,424	5,779 9,507
CLARK FORK RIVER at Whitehorse Rapids (12)(NWS)		,	13,781	11,200	89		12,519	9,450	89	-	10,633

- (1) Adjusted for storage in Lake Koocanusa.
- (2) Adjusted for storage in Silver Lake, diversions to and pumping from
- (3) Adjusted for storage in Georgetown Lake, diversions from and pumping (4) Sum Flint Creek at Maxville and Boulder Creek at Maxville.
- (5) Sum of North Fork Lower Willow Creek near Hall and South Fork Lower Willow Creek near Hall

LEGEND - Diainage Boundary

%1963-77 AVERAGE

Over 130%

110 - 130%

90-110%

70-90%

Under 70%

- (6) Difference in observed flow Clark Fork above Missoula and Blackfoot
- (7) Adjusted for storage in Painted Rocks Reservoir.
- (8) Adjusted for diversion into Sunset Highline Canal.
- (9) Difference in observed flow Clark Fork above and below Missoula.
- (10) Adjusted for storage in Hungry Horse Reservoir.
- (11) Adjusted for storage in Hungry Horse Reservoir and Flathead Lake.
- (12) Adjusted for storage in Hungry Horse Reservoir, Flathead Lake and Noxon Rapids Reservoir.
- (NWS) National Westher Service forecast.

CANADA

COLUMBIA RIVER DRAINAGE

MONTANA

MOUNTAIN SNOW WATER EQUIVALENT

#### SUMMARY OF SHOW MEASUREMENTS

RIVER DASH	Number of Court of	THIS TE	AR'S SHOW PERCENT OF
SUBWATERSHED	Averijed	Cast Law	Assets #
Kootenai/BC	22	85	75
Cootenai/Montana	8	87	85
Kootenal	30	85	78
Little Bitterroot	5	105	127
Flathead	34	89	95
Clark Fork above			
Blackfoot	31	94	101
Blackfoot	17	93	106
Clark Fork above			
Missoula	48	94	103
Bitterroot	14	88	103
Lower Clark Fork		1	
below Missoula	13	94	97
Clark Fork (Total	'		
w/o Flathead)	73	92	102
Pend O'Reille	, ,	71.	100
(Clark Fork &			
Flathead)	107	91	99
Columbia (Pend	107	7	177
O'Rellle &			
	1 23	90	94
Kootenai)	1 23	90	94
			Į.

#### MOUNTAIN SNOWPACK

Snowfall during February was extremely licavy in the mountains on the west side of the Bitterroot and Clark Fork dralnages along the Idaho-Montana border. Snow water equivalent increases of 15 to 18 inches were recorded. This would indicate over 150 inches of snowfall for February. In some areas the snow water equivalent for February was equal to the total amount that fell from November through January.

The snowpack is generally near average in most headwater drainages. Exceptions are the Kootenai River headwaters above Libby Dam, the Yaak River and the North Fork of the Flathead River where the snowpack is below average. The areas between Libby and Kalispell along the Kootenai-Flathead divide have above average snowpack. The area along the Clark Fork-Black-foot divide continues to show above average snow.

# WATER SUPPLY OUTLOOK Expirited as 'Poor, Fels, Asserts, Exception' With Respect to Usual Supply,

STREAM IN AREA	Seal on	Luiu Suuson
Tobacco	fair	fair
Little Bitterroot	ex	avg
Mission Valley	avg	av9
Flint Creek	avg	fair
Upper Clark Fork	avg	avg
Nevada Creek	ex	249
Blackfoot	avg	avg
West-side Bitterroot	avg	avg
East-side Bitterroot	avg	avg
Bitterroot River	avg	avŋ
Lower Clark Fork	avg	avg

#### STREAMFLOW FORECASTS

Spring and summer streamflow is forecast to be between 90-100 percent of average for most drainages. Somewhat lower runoff is expected on the North Fork of the Flathead, Kootenai and Yaak Rivers and some small tributaries in the Upper Clark Fork drainage. On these streams forecasts are in the 80-90 percent range, are higher than those Issued last month, and are the result of well above normal snowfalls in February in most high elevation

The outlook for irrigation water supplies is much improved over last month. Storm patterns for March are expected to continue from the west. Earlier this season most storms were from the north and did not produce normal snowfall in the mountains. If snowfall is average or above during March and April, most areas could expect near average irrigation water supplies.

Streamflow early in the season will be larger than usual in some drainages as the heavy, low elevation, snow-

The mountain snowpack continues to accumulate in high elevation watersheds. As this snow melts in the spring and summer it will be used for irrigation, recreation and power generation and by water fowl, fish and municipalities.

# Missouri River & Hudson Bay Drainages

Average based on 1963-1977 period.    PERIOD   April - September   April - July	STREAMFLOW FORECASTS	(	THIS!	-C.h.#		04030	19-1	11 **	2411	#I çaku
BEAVERHEAO RIVER near Grant (1)   120 70 117 171 105 71 96.4 148	BASIN, STREAM and IN FOULEGAST POINT		Thousand	Paremial			There	21		******
BEAVERHEAO RIVER near Grant (1) 120 70 117 171 105 71 96.4 148 BEAVERHEAO RIVER at Barratts (1) 162 72 - 226 140 71 - 198 RUBY RIVER near Alder 95.0 90 - 105 81.0 91 - 89.0 BIG HOLE RIVER near Boulder 99.0 100 115 99.1 95.0 102 104 93.5 MILLOW CREEK near Harrison 17.0 79 - 21.5 15.4 80 - 19.2 MILLOW CREEK near Grayling (2) 465 90 469 519 365 89 375 403 MAOISON RIVER near Grayling (2) 465 90 469 519 365 89 375 403 MAOISON RIVER near Gateway 515 90 - 572 438 90 - 488 INFLOW MILLOW CREEK RESERVOIR near Bozeman (4) 26.2 87 - 30.1 23.0 88 - 26.0 GALLATIN RIVER near Gozeman (5) 41.2 87 - 47.4 36.0 88 - 26.0 MINIOUSE CREEK RESERVOIR NEAR BOZEMAN SSOURI RIVER at Logan 557 MISSOURI RIVER at Toston (6)(MMS) 2.200 82 2.845 2.672 1.940 83 2.401 2.33 SUH RIVER at Gibson Oam (7) 545 94 661 578 500 94 596 529 SUN RIVER at Fort Benton (8)(MMS) 3.390 82 - 4,148 3.020 83 - 36.4 TWO MEGICINE CREEK near Browning (9) 246 95 - 259 235 96 - 246 MISSOURI RIVER near Browning (9) 246 95 - 259 235 96 - 247 MISSOURI RIVER near Browning (9) 246 95 - 259 235 96 - 248 MISSOURI RIVER near Browning (9) 246 95 - 259 235 96 - 248 MISSOURI RIVER near Browning (9) 3.980 83 - 4,794 3.560 84 - 4,233 MISSOURI RIVER near Browning (9) 3.980 83 - 4,794 3.560 84 - 4,233 MISSOURI RIVER near Delpine (10)(RMS) 3.980 83 - 4,794 3.560 84 - 4,233 MISSOURI RIVER near Delpine (10)(RMS) 3.980 83 - 4,794 3.560 84 - 4,233 MISSOURI RIVER near Delpine (10)(RMS) 3.980 83 - 4,794 3.560 84 - 4,233 MISSOURI RIVER near Delpine (10)(RMS) 4,410 85 - 5,215 3.900 85 - 4,586 MORTH FORK MUSSELSHELL RIVER near Oelpine (6.2 97 - 6.4 5.3 96 - 5.585	Average based on 1963-1977 period.	PERIOD	ACT I TO S		Septemb	er			- July	
	BEAVERHEAO RIVER near Grant (1) BEAVERHEAO RIVER at Barratts (1) RUBY RIVER near Alder BIG HOLE RIVER near Melrose BOULDER RIVER near Boulder WILLOW CREEK near Harrison MADISON RIVER near Grayling (2) MADISON RIVER near Grayling (2) MADISON RIVER near Grayling (2) MADISON RIVER near Goteway INFLOW MIDDLE CREEK RESERVOIR near Bozeman (4) HYALITE CREEK near Bozeman (5) GALLATIN RIVER at Logan MISSOURI RIVER at Toston (6)(NWS) SHEEP CREEK near White Sulphur Springs SUN RIVER at Gibson Oam (7) BELT CREEK near Monarch MISSOURI RIVER at Fort Benton (B)(NWS) TWO MEDICINE CREEK near Browning (9) BADGER CREEK near Browning MARIAS RIVER near Shelby (NWS) MISSOURI RIVER at Virgelle (10)(NWS) SOUTH FORK JUDITH RIVER near Utica MISSOURI RIVER near Landusky (10)(NWS) NORTH FORK MUSSELSHELL RIVER near Oelpine		162 95.0 630 99.0 17.0 465 815 26.2 41.2 22.2 22.2 22.2 3,980 14.2 4,410 6.2	70 72 90 80 100 79 90 91 90 87 87 85 82 97 94 107 82 95 91 90 91 82 95 91 90 83 95 95	117 	171 226 105 792 99.1 21.5 519 892 572 30.1 47.4 649 2.672 22.8 578 146 4.148 259 133 577 4.794 14.9 5.215 6.4	140 81.0 580 95.0 15.4 365 657 438 23.0 36.0 473 1.940 19.3 500 145 3,020 235 105 485 3,560 13.2 3,900 5.3	71 71 91 79 102 80 89 93 90 88 88 85 83 97 94 108 83 96 90 91 84 97 85	96.4 	148 196 89.0 730 93.5 19.2 409 706 488 26.0 41.0 2134 3,640 214 116 532 4,238 13.6 4,586 5,76
MILK RIVER at Eastern Crossing (NWS)	MILK RIVER at Eastern Crossing (NWS) MISSOURI RIVER near Wolf Point (12)		301 4,970	* 108*	-	278* 5,525	4,400	90	-	4,885 11,864

\*For the Period March - September

#### (1) Adjusted for storage in Llma and

(5) Adjusted for storage in Middle Creek Reservoir.

(6) Adjusted for storage in Llma, Heb-gen, Ennis & Clark Canyon Reser-

(7) Adjusted for storage in Gibson Reservoir & diversions.

(8) Adjusted for storage in Lima, Clark Canyon, Hebgen, Ennis, Gibson, Pishkun, Willow Creek &

Canyon Ferry Reservoirs.
(9) Adjusted for storage in Two Medicine Reservoir & diversions in Two Medicine Canal.

(10) Adjusted for Lima, Clark Canyon, Hebgen, Ennis, Gibson, Pishkun, Willow Creek, Canyon Ferry, Elwell (Tiber) Reservolrs.

(11) Adjusted for Ft. Peck in addition to those shown in (10).

(12) Adjusted for storage in Canyon Ferry, Elwell (Tiber) and Ft. Peck

(13) Sum Yellowstone River near Sldney & Missouri River near Culbertson.

(14) Adjusted for storage in Lake

(NWS) National Weather Service Forecast.

#### WATER SUPPLY OUTLOOK Engineers of the Poor, Fully, Antonio, Extension With Respect to thesel Supply

STREAM of AREA	\$0+l+1 \$4#1:m	L 818 \$48305
Beaverhead	fair	fair
Ruby	avg	avg
Big Hole	avg	fair
Boulder	ex	avg
Jefferson	avg	fair
Madison	avg	avq
Gallatin	avg	fair
West-side Missouri	ex	avq
Smith-Belt	ex	avq
Sun	avq	avg
Teton	avg	avg
Marias	avq	avg
Judith	ex	avg
Musselshell	ex	avg
Milk	ex	avg
Bear Paws	ex	ex
St. Mary's	avg	avg

#### STREAMFLOW FORECASTS

The Missouri River and streams in the

Jefferson River drainage are expected to have below average spring and summer streamflow. Runoff in these areas is expected to be in the 70-85 percentof-average range with the lowest flows coming from the Red Rock and Beaverhead Rivers. Runoff from the Bear Paw, Little Rockies, Snowy and Highwood Mountains and from most lower elevations throughout the Missouri River drainage will be above average. Most other streams are predicted to average runoff. With storms becoming more westerly many areas showed considerable improvement in snow accumulation during the past month. Additional improvement can be expected if westerly and southwesterly storms continue rather than previous northerly storms that brought cold weather and large amounts of snow to valley areas earlier in the season.

Late season irrigation supplies could be short in some areas of southwest Montana, but most areas should have near normal supplies.

#### SUMMARY OF SHOW MEASUREMENTS

Beaverhead	RIVER BASIN	Humber of Courses	MATER AS	AR'S SNOW PERCENT OF
Ruby     9     78     93       Big Hole     19     75     90       Boulder     10     99     112       Jefferson     58     80     95       Madison     23     76     95       Gallatin     16     74     91       Mlssourl Headwater     97     78     94       West-side Missouri     7     105     119       Smith & Belt     6     78     104       Missourl Main-stem     13     89     111       Teton & Sun     8     89     108       Marias     4     106     100       Marias-Teton-Sun     12     96     104       Judith     9     111     81     113       Judith-Musselshell     11     81     112       Milk     9     91     180	SUB-WATERSHED	Averaled	1, 0 91 Y + 44	A-m-min +
Bear Paws	Ruby Big Hole Boulder Jefferson Madison Gallatin Mlssourl Headwater West-side Missouri (Toston-Cascade) Smith & Belt Missourl Main-sten Teton & Sun Marias Marias-Teton-Sun Judith Musselshell Judith-Musselshell Milk Bear Paws Mlssouri (Total)  Saskatchewan St. Mary's Bow River in	9 19 10 58 23 16 97 7 6 13 8 4 12 6 5 11 9 11 9 142	78 75 99 80 76 74 78 105 78 89 106 96 80 81 81 91 94 81	93 90 112 95 91 94 119 104 111 100 107 111 113 112 180 219 100

# LEGEND --- Drainage Boundary ▲ Goging Station % 1963-77 AVERAGE MISSOURI RIVER & HUDSON BAY DRAINAGES MONTANA Under 70% MOUNTAIN SNOW WATER EQUIVALENT

#### MOUNTAIN SNOWPACK

Many areas in southwestern Montana have received good snowfall during ebruary. Currently, only a smal area in the Red Rock River headwaters along the Montana-Idaho border and the Bighole River drainage have below average snowpack. The remainder of the Missouri River headwaters show near average amounts of water stored in the snowpack. Along the Continental Divide, north of Butte, the snowpack is generally average or above average.

Most foothill and valley areas have above average snow water contents. Higher elevations in the Belt and Castle Mountains have near average snowpack. The Snowy and Highwood Mountains have above average snowpack while the Little Rockles and Bear Paw Mountains have well above average



The mountain snowpack has not begun to melt but streams are beginning to open.

Clark Canyon Reservoirs.
(2) Adjusted for storage in Hebgen

Lake.
(3) Adjusted for storage in Hebgen
Lake and Ennis Lake.
(4) Sum of West Fork Hyalite Creek and
East Fork Hyalite Creek above the

# Yellowstone River Drainage

#### PROSPECTIVE STREAMFLOW FORECASTS

	THIS TEAS	PAST ALCOHO	THIS YEAR	PAST ALCORD
	FORECAST	THOUSAID ACRE LEEL	FORI CAST	THOU: AND ACRE FEET
DASIN, SERI AM MOTH FORECAST POINT	Thousand Partest of	Cattern Landie	Theyrend Perrent ge Acre Ferr Avertige	U-111111 Assungs
Average based on 1963-77 period PIRIOD	April -	- September	April -	July

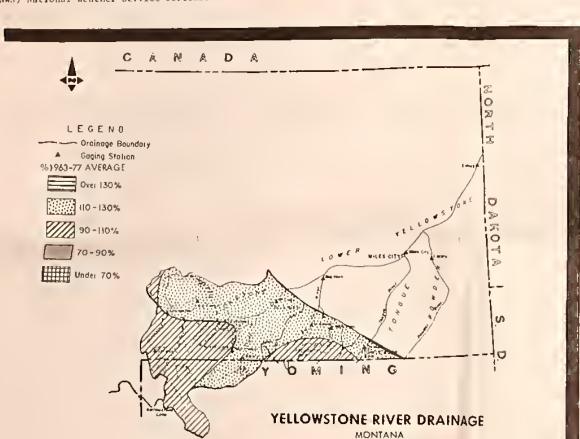
#### YELLOWSTONE

YELLOWSTONE RIVER at Corwin Springs	2,060	98 97	2,157	2,102	1,700	101	1,756	1,688
YELLOWSTONE RIVER near Livingston				2,471	1,983	97		2,048
BOULDER RIVER at Big Timber	375	90		416	350	92		382
STILLWATER RIVER near Absarokee (1)	625	95		660	535	95		555
CLARKS FORK RIVER near Belfry	585	96		608	530	98		541
CLARKS FORK RIVER near 51)esia	665	96		695	575	98		588
ROCK CREEK near Red Lodge	109	92	109	118	84.0	92	81.9	91.4
INFLOW COONEY RESERVOIR near Boyd (2)	61.5	97		63.3	51.5	9B	0117	52.7
YELLOWSTONE RIVER at Billings (NWS)	4,440	95	5,500	4.6B2	3,810	96	4,605	
	2.120	104	2,679					3,979
BIG HORN RIVER near St. Xavier (3) (NW5)	182	93	C # 07 3	2,034	1,950	105	2,400	1,861
LITTLE BIG HORN RIVER near Hardin				196	165	95		174
YELLOWSTONE RIVER at Miles City (4) (NW5)	6,900	97		7,142	6,050	97		6,243
YELLOWSTONE RIVER near Sidney (5) (NWS)	7,600	97		7,807	6,600	97		6.805
dia and a second and a second and a second								~6

- (1) Adjusted for storage in Mystic Lake.

- (2) Adjusted for storage in Cooney Reservoir.
  (3) Adjusted for storage in Buffalo Bill, Boysen, Bull Lake,
  Pilot Butte and Bighorn Reservoirs.
  (4) Adjusted for storage in Bull Lake, Buffalo Bill, Boysen,
- Pilot Butte, Bighorn and Tongue River Reservoirs. (5) Adjusted for reservoirs shown in (4) and diversions into

- the Lower Yellowstone Canal. (NWS) National Weather Service forecast



#### WATER SUPPLY DUTLOON Entertied of "Paot, Foll, Assesse, Entertied of Paot, Ent

	Flan P	elled
STACAN W AREA	Soring Searon	Lete Seeses
Yellowstone at		
Llvingston	avq	avq
Shlelds	ex	avq
Boulder	avg	avo
Sweetgrass -		,
Blg Timber	ex	avq
5tillwater	avg	avg
Rock Creek	avg	avq
Clark's Fork	ex	avq
Yellowstone above		
Bighorn	ex	avq
Bighorn	avq	avq
Little Bighorn	ex	avg
Tongue	ex	avg
Powder	ex :	avq
Lower Yellowstone	ex	avq

#### STREAMFLOW FORECASTS

Good snowfall during February has improved the outlook for spring and summer streamflow. Based on current snowpack, runoff is forecast to be near average on most drainages. Some low elevation areas can be expected to produce above average runoff early in the season as the heavy. low elevatlon, snowpack melts. Assuming that snowfall during the next two or three months remains normal or above. late season irrigation supplies should be adequate on most drainages.

#### SUMMARY OF SHOW MEASUREMENTS

MOUNTAIN SNOW WATER EQUIVALENT

#### MOUNTAIN SNOWPACK

Most higher elevations of the Yellow-stone River headwaters have near aver-age snowpack. Snow water content in-creases during February were generally 5 to 12 inches in higher elevations. In general lower elevations and valley areas have a heavier than usual snow-pack. Snow in the north end of the Bighorn Mountains is also near average. The Crazy Mountains have above average snowpack.

#### SATELLITE SNOW COVER

8eginning this month the percentage of snow cover for the Missouri River drainage above Canyon Ferry Reservoir will be reported. This information is obtained from polar orbiting satelites, received and processed by the National Environmental Satellite Ser-vice (NESS) of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA).

Reports are provided once or twice weekly when not restricted by cloud cover. The snow mapping season begins in November and continues until the end of the snow melt season.

The Missouri River drainage above Canyon Ferry is one of about 30 drainages being mapped in the western U.S. The only other drainage being mapped in Montana is the Kootenai River above Libby Oam, however, most of this drainage is in Canada.

This information will be used to supplement data gathered from snow courses and SNOTEL sites. It will be particularily useful in determing snow covered areas in the valley and to determine the snow line during the snow the snow line during the melt period.

It should come as no surprise that the entire drainage above Canyon Ferry has been completely snow covered from mid-November through December and January, and for much of February.

PERCENT OF THE MISSOURI RIVER DRAINAGE ABOVE CANYON FERRY THAT HAS SNOW COVER

0	te		2	Snow	Cover
No	ov. 1.	. 1978			3
	ov. 14.			98	
06	ec. 6	1978		100	
	ec. 10.			100	
0€	ec. 19,	1978		100	
Ja	in. 1,	1979		100	
Ja	in. 8,	1979		100	
	n. 14,			100	
Ja	n. 23.	1979		100	
	n. 29.			100	
Fe	b. 4,	1979		100	
Fe	b. 20,	1979		98	
Fe	b. 27,	1979		0.0	

### SNOW SURVEY DATA

				) I A d			NILI DAIA						
SHOW			THIS YEAR		PAST R		CRAINAGE BASIN ON I SO SINGE COURS			THIS LEAR		PAST 01	ECOND
NAME	Eleverion	0110 el Sur+ej	Share Death Thickert	State of the seal	CIT-TOP	0.1.21.	NAME COURS	[levæ.w	al 50+14.	Sour Depth (15) Set1	March Cyclest (IAsher)	Late Contract	Adelle
ABUNDANCE LAKE AMBROSE	8800 6480	2/27 3/02	52 47	13.4 12.6	22.4	18.9	GULD STONE GRASSHOPPER	8100 7000	2/28	54 30	13.6	18.5	15.5
ARCH FALLS BAOGER PASS	7350 6900	2/27	40 96	10.1	34.3	11.2	GRAVE CREEK PILLON	45no 4300	3/01	51 5P	15.5	19.1	17.5 17.9
BALO MOUNTAIN (WY)	9600 7500	3/02	60 48	18.1	26.3	19.3	GRIZZLY PEAK	5150 8400	5758 8278	48	14.2	13.2	10.9
BAREL CREEK BAREL CREEK	5600 5500	3/01	SP 113	14.8	16.2	11.5	GURSIGHT LAKE HAND CREEK	6300 5030	3/03	99 51	34.9	38.0	13.2 36.2
BAREE MIOWAY BAREE TRAIL	4600 3800	5/55	101	32.7	38.8	43.8	HAND CREEK PILLOW HAWKINS LAKE PILLOW	5030 6450	2/2B 3/01	SP SP	15.4	14.n 23.r	27.5
BASIN CREEK BASSOO PEAK	7180 5150	2/26	51 46	6.4	11.0 5.8	7.0	HEART LAKE TRAIL REBGEN DAM	4800 6550	2/27	63 42	25.1	19.8	21.1
BATTLE RIDGE BEAGLE SPRINGS	6020 8850	2/26	35 37	13.5	12.4	9.6 7.5	HELL ROAKING OIVIDE HERRIG JUNCTION	5770 4850	3/01	63	25.5	27.4	29.6
BEAGLE SPRINGS PILLOW BEAR HASIN	8850 8150	3/04	SP 61	8.7 7.7	0.8		HOOD MEADOR HOODOO BASIN	66na 600a	2/27	36 123	9.0 42.3	10.1	9.7
DEAR PAW SKI AREA DEAVER LAKE	5200 5900	2/26	44 66	16.8	26.1	19.5	HOODOO BASIN PILLOW HOOOOO CRELK	6000 5900	2/20	5P	38.2	49.1	44.0
BERRY MEADOW BIG CREEK	7000 6750	2/23	31 110	21.5 7.6 35.7	8.3	7.2	INDEPENDENCE INTERGAARD	7850 6450	2/28	56 29	16.0	19.2	17.1
BIG SKY MENDOW BIG SKY	7700 6350	3/02 3/01	54 41	13.1	45.5 17.7	13.8	ISLANO PARK (II)) JACK CREEK	6310 7500	2/27	61	16.4	8.A 8.A	15.1
BIG SMOWY BIG SPRINGS (10)	7150 6500	2/27	69	10,2	9.8 27.0	6.6 19.0	JAHNKE LAKE TRAIL JOHNSON PARK	7200 6450	2/28	40 32	9.6 8.2	12.0	9.1
BLACK BEAR BLACK BEAR PILLOW	7950 7590	2/27	105	18.1 33.8	23.5	18.7	KING CREEK SAOOLE	6200 4550	2/26	41 27	10.5	19.0	10.6
BLACK MOUNTAIN BLACK PINE	7750 7100	5/56	SP 44	29.4 12.2	38.4 15.5	32.2	KING SPRINGS KINGS HILL	4150 7500	2/27	25	6.3	9.1	2.7
BLOODA OICK BROODA OICK	7100 7100 7600	2/28	42 SP	11.3	14.7	13.2	KISHENEHN KIT CARSON (ID)	3890 5020	3/05	30 50 50	12.8 6.8 9.2	16+(I 9+(I	8.1
BLOODY DICK PILLOW	7600	2/28	47 SP	11.5	15.3	12,9	KIHANIS CAMP LAKE CAMP (WY)	3720 7850	2/26 3/01	26 43	9.2 6.6	6.4	1.7
BOTS SOTS BOULDER MOUNTAIN	5900 8000 7950	3/03	72 34	25,6	20.8	25.9	LAKE CREEK LAKEVIEW CANYON	6100 6930	3/02	43 41 41	9.1 9.2	9+2	8.6 10.8
BOULDER MOUNTAIN PILLOW BOW RIVER #1 (A)	7950 7950	2/26	60 5P	19.1	22.1	17.1	LAKEVIEW RIOGE LEMHI PASS	7400 7480	2/28	36	9.2 8.2	9.9	9.7
BOX CANYON	5100 6670	2/27	31 40	8.0	7.8 13.2	7.9 12.1	LEMMI RIDGE PILLOW	8100 8100	3/04 3/04 3/04	40 43	9.8	15.8	8.9
BOX CANYON PILLOW  BRANHAM LAKES  BRINGER BOW	6670 6850	2/28	SP 69	7.9	30.2	26.2	LICK CREEK PILLOW	6860 6860	2/27	5P 39	9.0	9.h	9.0 9.0
BRIDGER BOWL PILLOW	7250 7250	2/28	66 \$P	22.6 19.3	31.2 29.0	24.9	LITILE PARK LOGAN CREEK	740n 430n	3/01	5P 53	7.8	7,5 19.1	19.6
BRUSH CREEK TIMBER BULL MOUNTAIN	5000 6600	2/28 2/26	40 36	11.0 9.2	11.0 5.0	9.5	LOLO PASS (ID) TOLO PASS PILLOW	5230	5/26 2/28	33 88	9.0 31.0	9.7 31.0	7.3 27.1r
BURGESS R.S. #2 (WY) CABIN CREEK	7900 5200	7/02	28 31	6.8 7.9	8.3 9.2	7.1	LOOKDOT (IL)	5230 8800 5250	3/02	SP 68	24.6 17.2	25.6	20.5
CALL ROAD CALVERT CREEK	8050 6450	3/04 3/01	47 41	10.8	12.6	10.2	LOST HORSE LOWER TWIN	5940	5/28	94 88	27.A 30.0	33.1i 32.9	30.2
CALVERT CREEK PILLOW CAMP CREEK (ID)	6450 6800	3/01 2/28	SP 32	8.0 7.3	12.6	9.5 9.8	LUBRECHT FLUME LUBRECHT FLUME PILLOW	7900 4200	2/26	56 29	8.8	21.0 7.1	18.7
CAMP MISERY CAMP SENIA	6400 7890 .	2/27	119 . 32 .	39.8 5.5	48.4	43.9 5.1	UBRECHT FOREST N N	5450 5450 4650	2/27	33	9.0	0 - 1	6.4 7.1
CANYON (WY) CAPROT BASIN	7750 9000	3/01	62 80	14.4	19.1 35.0	14.3	LUBRECHT FOREST # 6 LUBRECHT HYDROPLOT	4040 4200	2/27 2/27 2/27	18 19 24	5.2 6.0 7.1	4:0 5:7	3.5 4.0
CARTER CREEK CHATEAU LAWN #8 (AL)	7400 5700	3/01 2/27	24 41	9.5 10.6	2.6 8.0	4.3 9.7	LUPINE CREEK (NY) MADISON PLATEAU	730h 7750	2/27	38 67	9.1	7.0 11.4	5.7 9.9
CHESSMAN RESERVOIR CHICKEN CREEK	6200 4060	3/02	31 49	8.2	5.5 15.6	3.5	PAUISON PLATEAU PILLOW MANY GLACIER	775u 4960	2/27	SP 62	19.4 20.4 18.1	23.9 23.1	17.0 18.7
CLOVER MEADOW COLE CREEK	8600 7850	3/04	56 51	13.9 15.8	17,6 10.0	14.9 15.1	MANY GLACIER PILLOW MARIAS PASS	49f.0 5250	3/01	SP 59	15.9	20.A 19.1 16.1	- 17
COLE CREEK PILLOW COLLEY CREEK	7850 6300	2/28 3/01	SP 4I	13.3	9.5 10.1	15.0	MAYNARD CREEK MAYNARO CRLEK PILION	6210 6210	5/58	4.9 SP	15.2	20.3	16.3
COMBINATION PILLON	5600 5600	2/28	27 SP	6.2 5.9	5.9	5.6	MIDDLE MILL CREEK MIDERAL CREEK	7650	2/28	51	14.2	13.6	10.0
COOKE STATION COPPER BOTTOM	815 <sub>0</sub> 5200	3/02	81 45	19.3	27.0 11.3	18.0	MIKROR LAKE #6 (AL)	4000 6600	2/27	51 58	14.3 8.4	7.9	17.11
COPPER BOTTOM PILLOW COPPER CAMP	5200 6950	2/28	SP 88	13.0	12.2	13.0	MISSION MOUNTAIN MONUMENT PEAK	5050 8800	2/27	32 73	8.5	9.7 29.0	24.5
COPPER CAMP PILLOW COPPER CREEK	6950 5700	5/28	SP	27.9 33.9	30.4	29.8	MONUMENT PEAK PILLOW MOOSE CREEK (10)	8800 6200	5/5B	52	15.7	19.2	15.6
COPPER LAKE CREEK COPPER MOUNTAIN	6100	2/28	72	16.4	14.9 25.2	15.1	MOUNT LOCKHART	6400	3/05	31 66	6.2 22.2	7.1 24.8	20.6
COTTONWOOD CHEEK	7700 6400	2/27	36 31	7.1	8.0	9.9	MOUNT LOCKHART PILLOW MUOD LAKE	640n 7650	3/05	SP 61	19.8 16.9	22.0 25.0	18.7
CREVICE MOUNTAIN	4200 8400	3/03	39 51	11.2	12.7	10.n 9.8	NEW WORLD NEWTON MOUNTAIN	5600	3/02	41 03	12.0 25.2	15.9 30.4	13.2
CRYSTAL LAKE DAO CREEK LAKE	6100 8400	3/04	47 45	14.I 11.2	17.9 11.0	12.4 11.6	NEZ PERCE CAMP NEZ PERCE CAMP PILLOW	5580 5580	3/02 3/02	52 SP	16.4 15.4	17.3 17.8	13.8
DALY CREEK	7600 5780	2/27 2/26	46 36	11.9 11.4	12.9 11.2	10.7	NEZ PERCE CREEK NEZ PERCE PASS	6500 6570	2/27	28 57	6.8 18.6	7.9 19.7	7+0 15.7
DARKHORSE LAKE DEADMAN CREEK	8600 6450	3/02 3/02	74	22.5 11.2	31·1 15·6	25.2 11.0	NOISY HASIN HOIST BASIN PILLOW	6040 6040	2/27	112 SP	33,6 30,6	43.6 57.5	39.b
OEADMAN CREEK PILLOW OESERT MOUNTAIN	6450 5600	2/28	SP 51	10.3	13.8 15.0	9.8 14.5	NOISY CREEK NORRIS BASIN (VY)	3600 7500	2/27	26 38	8.8 8.4	9+2 14+4	10.1
DEVILS SLIDE DISCOVERY BASIN	8100 7050	2/27 3/01	58 37	9.2	21.3	20.0	PORTH FK. ELK CREEK DORTH FK. ELK CREEK PILL	6250 6250	2/27	93 50	13.0	15.0 13.8	11.7
OIVIDE PILLON	7800 7800	3/04 3/04	43 \$P	10.2 9.2	11.4	9.8	NORTH FORK JOCKO NORTH MEADOW	6330 7500	3/01	112 33	38.7 8.6	7.2	7+12
DIX BILL EAST FORK P.S.	6400 5400	2/28	40 24	11.6	12.0	9.9 6.8	NORTHEAST ENTRANCE PILL.	7400 7400	3/03 3/03	50 50	10.6 10.3	13.4	9:1 8:7
EL OORADO MIME ELK HORN SPRINGS	7800 7800	2/26	60 30	18.3	19.5 13.3	18.9 8.5	NOTCH OLD EXITHFUL(WY)	8500 7360	3/04 2/28	40	14.9	16.5	15.3
ELK PEAK EMERY GREEK	8000 4350	2/27	5 0 5 4	13.8 15.8	21.2	14.9 II.9	OPHIR PARK PETERSON MEADOWS	7150 7200	2/28	57 35	18,4	20.2 8.5	17.9 9.1
EMERY CREEK PILLOW FATTY CREEY	4350 5500	2/26	SP 80	14.3 25.3	14.3	20.6	PETERSON MEAGONS PILLOW PICKFOOT CHEEK	7200 6650	2/27	SP 44	7.5 13.2	15.8	9 <sub>1</sub> 1
FISH CREEK FISHER CRELK	8000 9100	2/26			7.0	_	PICKEGOT CHEEK PILLOW PICKIC GROUNDS	6650 6200	2/26	S P 24	10.9	6.2	11,2
FISHER CREEK PILLOW FIVE SPRINGS FALLS (MY)	9100 7500	3/02	SP	31.4	37.6 10.5	52.3	PIPESTONE PASS PIPESTONE UPPER #2 TALE	7200 5300	2/27	25 35	5.0 9.0	4.2 7.5	8.2
FIVE-HULL FLATTOP MOUNTAIN FILLOW	5700 6300	3703	26 33	8.8	7.7	(., 9	POURMAN CREEK PILLOW	5100 6500	7/01	SP 36	33.5	30.7 9.6	29.6
FLEFCER RINGE FOOLHED	750 <b>n</b>	2/26 2/27	42	33.2	36.9 13.9	44 .5 10.1	PORCUPINE PILLOW POLOMACETON PAGE	6500 7150	7/01	SP 49	7.9	18.4 19.2	13.4
FOURTH OF JULY	6900 4450	2/27	46 54	12.1 9.U	17.7	7.7	POTOMAGETON PARK RED MOUNTAIN	6000 5260	3/01 3/02	52 72	15.J 20.8	10.5 26.0	17.5
FRED BURR PASS	3450 8000	3/02	5,4 62	17.4	25.6	22.9	REO TOP ROCK CREEK	5600 6000	2/27	38 49	11.2	13.4	6.5 13.7
FREIGHT CREEK FRIDAY HILL FROM FRIDAY	4620	3/03 3/02	49 63	15.3	16.7 19.5	14.1	POCKER PEAR ROCKER PEAR PILLOW	8000 4701	2/23	SF 20	12.2 8.A	15.2	13.0
FRONNER MEADONS FRONNER MEADONS PILLOW	6480 6480	3/02	39 SP	9.5 7.4	9.0	8.II	BOCKA BOA GIFFON BOCKA DOA	4700 6550	2/26	5th 43	7.6	8.6	4.4 13.3
GOAT MOUNTAIN	7100	3/27	63 45	18.9	13.0	21.2	SAGAJAWAA SAGOLE MOUNTAIN SAUGE MOUNTAIN BYLLOH	7940 7940	2/27	67 SP	20.5 20.6	27.r 27.2	28.4
CUTIL CHEEK TVKE	7200	5/56	49	13.7	13.8	34.n	SAUDLE MOUNTAIN PILLOW	1,7411	- (16)				

SNOW (Continued)			THIS YEAR		PAST R	
DRAINAGE DASIN INC' SNOW COURSE		Dete of Survey	Snow Death (Inches)	Metal Content (Inches)	Water Contr	
HAME	Elevation*	01 301101	1,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	111/0/41/	Lett Year	# +et alic
SALES AND MOUNTAIN (10)	8710	2/27	87	23.6	36.2	28.4
SAWTELL MOUNTAIN (ID)	8300	2/26	61	17.2	26.9	21.3
SENTINUL CREEK SHOWER FALLS	8100	2/27	63	17.7	23.9	21.4
HOWER FALLS PILLOW	8100	2/27	SP	17.6	23,2	21.0
SILVER RUN	6630	3/01	28	4.6	4.6	4.5
STEVER RUN PILLOW	6630	3/01	SP	4.9	4.5	-
SKALKAHO SUMMIT	7260	2/27	7 I	22.4	28.4	23.5
SKALKAHO SUMMIT PILLOW	7260	2/27	SP	20.2	26.2	-
SLAG-A-MELT LAKE	6750	3/02	7 <sub>8</sub>	19+2	28.8	24.2
SLIDE ROCK MOUNTAIN	7100	2/27	50	14.8	15.7	15.2
SMUGGLER MINE	6960	2/28	35	8.0	12.3	8.5
OUTH FORK SHIELDS	8100	3/05	73	24.6	27.6	21.3
POTTED BEAR MOUNTAIN	7000	3/n3	53	15.7	14.7	14.6
PUR PARK	8000	2/26	64	19.6	25.0	19.2
SPUR PARK PILLOW	8100	2/28	SP 91	20.0	26.0 34.8	20.0
TAHL PEAK	6050	3/0I 3/0I	SP	22.7	30.5	36.8 29.8
STAHL PEAK PILLOW	6050	2/22	28	7.2	8.1	6.8
TERMEDAT POINT (WY)	7500 6600	2/28	46	11.9	10.5	9.6
TEMPLE PASS	7780	2/27	42	10.3	12.3	11.6
STORM LAKE	6180	2/27	82	23.9	27.9	-
STRYKER BASIN STUART MILL	6500	2/28	29	7.2	6.1	7.9
STOART HOUNTAIN	7400	3/01	€ 5	28.9	36.9	34 . 6
SUCKER CREEK	3960	2/26	0	.0	3.€	
UGARLOAF	7350	2/22	40	9.5	10.5	9.5
UNSLT (ID)	5600	3/02	114	32.37	-	32.8
YLVAN PASS (WY)	7100	3/02	46	11.6	17.8	11.5
ARGHEE PASS (ID)	7000	2/28	49	11.8	16.0	13.6
AYLOR ROAD	4080	2/26	29	7.4	9.2	3.3
EN MILE LOWER	6600	2/27	34	9,2	7.4	6.8
EN MILE KIDOLE	6800	2/27	42	11.2	11.4	10.3
EN MILE UPPER	8000	2/27	45	13.0	13.9	12.8
EPEE CREEK	8000	3/02	59	13.4	16.6	I4.
EPEE CREEK PILLOW	8000 7900	3/02	SP 57	12.0	14.7	11.1
HUMB OIVIDE (WY) IMBERLINE CREEK	8850	2/26 3/01	38	16.0 6.8	20.3 8.6	18.2
RAIL CREEK	7090	3/04	39	9.4	10.2	7.3
RINKUS LAKE	6100	3/04	108	38.0	42.3	40.2
V MOUNTAIN	6800	3/01	60	18.6	19.3	17.2
WELVEMILE CREEK	5600	2/28	67	23.5	24.2	21.1
WELVEMILE CREEK PILLOW	5600	2/28	SP	16.6	19.6	17.7
HENTY-ONE MILE	7150	2/25	55	14.5	22.2	16.6
WIN CREEKS	3580	3/03	41	14.1	13.8	12.0
HIN LAKES	6510	2/28	114	38.3	44.8	38.2
IN LAKES PILLOW	6400	2/28	SP	35.5	43.0	38.2
PPER HOLLAND LAKE	P500	3/04	88	30.4	37.5	33.
ALLEY VIEW (IO)	6500	2/28	59	14.9	17.2	15.6
ALDHON	5600	3/h5	39	10.0	13.0	10.1
ALDRON PILLOW	5600	3/05	SP	8.8	9.4	10.1
ARM SPRINGS	0250	2/28	54	15.3	21.0	-
ARM SPRINGS PILLOW	6250	2/28	SP	16.5	24.2	-
EASEL DIVIDE	5450	3/01	77	22.4	31.7	32.4
EST YELLOWSTONE BYLLOW	6700	2/25	43	11.5	15.1	11.1
HISKEY CREEK	6700 6800	3/02	SP 65	10.1 19.0	9.8 23.8	8.0 17.9
HISKEY CREEK PILLOW	6800	2/27	SP	15.1	19.2	14.9
HITE ELEPHANT (ID)	7700	2/27	74	18.7	31.6	18.4
RITE MILL	6700	3/02	98	25.0	32.3	25.0
HITE MILE PILLOW	8700	3/02	SP	23.1	30.0	20.6
HITE PINE RIDGE	8850	3/04	30	6.5	4.0	4.6
ILLOW CREEK	6500	2/28	35	8.6	7.7	A.7
DEVERINE (WY)	7650	2/27	49	15.8	16.2	10.7
				_		
RONG CREEK	5700	2/28	52	14.8	16.2	13.4

Average based on 1963-77 period. A - Aerial observation; water content estimated. SP - Snow Pillow observation; water content only. "Estimated from SNOTEL.



#### RESERVOIR STORAGE (Thousand Acre Feet) END OF MONTH

Beson or Street	RESERVOIR	Useble Capecity	Thirly	List eco	Average
	COLUMBIA	<u>A</u>			
Kootenai	Koocanusa	5,694.0	2.329.0	1,591.0	
Flathead	Hungry Horse	3,428.0	2.236.0	1,641.0	2.329.0
	Flathead Lake	1,791.0	625.6	681.2	1.009.0
	Camas (4)	45.2	18.5	3.3	24.5
	Mission Valley (8)	100.3	59.8	38.3	34.
Clark Fork	Georgetown Lake	31.0	26.1	23.9	25.
	Lower Willow Creek	4.9	-	1.3	1.:
	Nevada Creek	12.6	6.5	1.0	5.
	Noxon Rapids	334.6	310.3	261.8	300.
Bitterroot	Painted Rocks	31.7	13.9	3.9	21.
	Сото	34.9	-	13.0	13.
	MISSOUR	<u> 1</u>			
Beaverhead	Lima	84.0			31.5
Dear all III was	Clark Canyon	328.9	156.6	159.0	141.4
Ruby	Ruby	38.8	130.0	29.8	27.
Madison	Hebgen Lake	337.5	241.0	243.2	202.
,,	Ennis Lake	41.0	34.6	35.4	37.
Gallatin	Middle Creek	8.0	-	-	3.
Missouri	Canyon Ferry	2,043.0	1.387.0	1,490.0	1,608.
	Hauser & Helena	61.9	52.5	52.2	57.
	Lake Helena	10.4	11.1	10.9	9.
	Holter Lake	81.9	79.9	80.9	51.
	Fort Peck Lake	18,910.0	16.760.0	14.000.0	13,110,
Smith	Smith River	10.6	.*	-	6.
	Newlan Creek	12.4	9.7	3.9	-
Musselshell	8air	7.0	-	-	4.
	Martinsdale	23.1	*	-	7.
Sun	Deadman's Basin	72.2	70.0	- 200 7	46.
Sun	Gibson Willow Creek	99.0	70.9	26.7	42.
	Pishkun	32.2 32.0	25.2 19.6	16.6 18.9	19. 17.
Marias	Lower Two Medicine	11.9	19.0	10.9	17.
101 103	Four Horns	19.2	-	-	_
	Swift	30.0		9.7	17.
	Lake Frances	111.9	_	28.1	78.
Milk	Elwell (Tiber)	1.347.0	530.0	518.8	576.
.,,,,,,	Beaver Creek	3.5	1.6	1.3	-
	Fresno	127.2	69.7	17.8	56.3
	Nelson	66.8	44.0	6.1	41.
	ниоѕои г	BAY			
St. Mary's	Lake Sherburne	66.2	25.8	29.8	21.
	YELLOWSTO	DNE			
Stillwater	Mystic Lake	21.0	15.1	5.0	7.
Clark's Fork	Cooney	27.4	13.6	13.1	14.
Tongue	Tongue River	68.0	-	30.9	32.
Big Horn	8jq Horn Lake	1.356.0	839.5	820.8	800.1



Water from the moutain snowpack helps sustain agriculture in Montana's fertile valleys.

#### AGENCIES AND ORGANIZATIONS COOPERATING IN MONTANA SNOW SURVEYS

#### COVERNMENT AGENCIES

Water Survey of Canada, Calgary, Oepartment of the Environment Water Resources Service, Department of Lands, Forests and Water Resources. British Columbia

Alberta Environment, Edmonton, Alberta

Federal

Department of the Army - Corps of Engineers
Department of Agriculture - Forest Service
- Soil Conservation Service

Department of Commerce - NOAA

- National Weather Service

Department of Interior - Bonneville Power Administration

- Bureau of Indian Affairs - Bureau of Reclamation

- Fish and Wildlife Service

- Geological Survey - National Park Service

#### STATE AGENCIES

Montana Conservation Districts Montana Department of Fish and Game

Montana Department of Natural Resources and Conservation Montana State University - Agricultural Experiment Station University of Montana - School of Forestry

DNRC - State Forester

#### PRIVATE ORGANIZATIONS AND INDIVIDUALS

Butte Water Company Montana Power Company The Anaconda Company Big Sky of Montana Jack & Scott Gravelly Art Christenson Jack Fenton

